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ABSTRACT

For the past two decades, Japanese management practices have attracted a great deal of attention in the United States. Quality Circles (QCs) have been considered to be one of the most promising approaches to improving American workers' productivity. QCs are defined as small groups of employees from the same work area who meet to identify, analyze, and solve various work-related problems, and to make recommendations to management. In Japan, QC activity in chemical industries has declined significantly over the years. In the United States, QC programs have failed in more than 60 to 75 percent of the organizations in which they have been tried. This study examined the attributional differences among top management, supporting staff, and QC members. Research data were collected from a structures fabrication and assembly plant in the southwestern United States. A total of 100 employees from a cross-section of the organization completed a survey questionnaire. These participants were selected due to their experience, knowledge, and involvement in QCs. The attributional differences among top-level managers, the supporting staff, and QC members were examined using a multivariate analysis of variance. The results revealed significant differences among the three groups on seven variables. It appears that the participants are making defensive attributions concerning the failure of QCs. (LLL)

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Attributions of Quality Circles' Failure: Differences Among Top Management, Supporting Staff, and Quality Circle Members

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Abstract

A cross-section of 100 employees of a structures fabrication and assembly plant in the southeastern U. S. completed a survey questionnaire which measured attributions of quality circles' failure and other items. These participants were selected due to their experience, knowledge, and involvement in quality circles (QCs). The attributional differences among top-level manager, the supporting staff, and QC members were examined using a multivariate analysis of variance (MANOVA). The results reveal significant differences among the three groups on seven variables. It appears that the participants are making defensive attributions concerning QCs' failure.

Attributions of Quality Circles' Failure: Differences Among Top Management, Supporting Staff, and Quality Circle Members

For the past two decades, Japanese management practices have attracted a lot of attention in the United States. Quality circles (QCs), in particular, have been considered as one of the most promising approaches to improving American workers' productivity. QCs are defined as small groups of employees from the same work area who meet for an hour each week to identify, analyze, solve various work-related problems, and make recommendations to management (Tang, Tollison, & Whiteside, 1987, 1989, 1991, in press).

In Japan, QC activity in chemical industries has declined significantly over the years. In the U.S., QC programs have failed in more than 60 percent (Marks, 1986) to 75 percent (Crosby, 1987) of the organizations in which they have been tried. Thus, identifying the attributions of QCs' failure seems to be an important task for researchers and practitioners (Tang & Butler, 1992). The major purpose of the present study was to examine the attributional differences among top management, supporting staff, and QC members.

Method

Subjects

Research data were collected from a structures fabrication and assembly plant in the southeastern U.S. A total of 100 employees from a cross-section of the organization (24 females and 76 males, 4.2% of the total work force) completed a

questionnaire. These employees were selected due to their experience, knowledge, and expertise in QCs.

Subjects can be categorized into three major groups: (a) blue-collar QC members (34 hourly member, 7 hourly leader), (b) supporting staff (16 supervisors, 19 salaried QC-supporting staff--plant engineers, quality engineers, industrial engineers, and QC facilitators), and (c) top management (16 middle-level managers--managers and superintendents, and 8 top-level managers--directors and vice presidents). The average age of the subjects was 41.64 (*SD* = 8.44). The participants had an average of 13.85 years of education. Their job tenure and QC tenure/experience were 148.19 months and 30.46 months, respectively.

Measurement

Forty-six items were developed based on the present review of literature and suggestions from key QC personnel to examine the attributions of QCs' failure (Tang & Butler, 1992). A 7-point Likert-type rating scale was used. The reliability coefficient for the scale was .85.

Results and Discussion

The results of a multivariate analysis of variance (MANOVA) using the 46 items revealed a significant difference among the three groups (top management, support staff, and QC members) [$F(98, 82) = 2.12$, $p < .001$, Wilks' Lambda = .08]. Further univariate *F*-tests suggested that the significant differences reside in seven variables. The Tukey test was used to determine the differences among the means ($p < .05$). The means of these variables are presented in Table 1.

The results suggest that top-level managers have a stronger tendency to recognize the significant conflict between QC meeting and production schedule than QC members. It is possible that top management's major concern is the production schedule. Thereby, they are unwilling to let employees spend a large amount of time in QC meetings. However, QC members do not agree with them.

QC members also have a stronger tendency to claim lack of support from QC leaders than the supporting staff. This is probably due to the fact that QC leaders are considered as a part of the supporting staff, therefore, they do not blame themselves for lack of support.

Both supporting staff and QC members indicate that the QC projects to be much more difficult than do top-level managers. It is possible that top-level managers may have more educational background, training, experience, knowledge, and expertise in different areas of the production process than the supporting staff and QC members, thereby, the former may consider QC projects much easier than the latter. The supporting staff and QC members may try to claim more credits for working on difficult tasks than easy ones.

Both supporting staff and QC members show higher ratings on poor communication channels to top management and the attitude that we have been doing it this way for many years than top-level managers. Supporting staff attribute more to lack of commitment from top management than top management personnel. Finally, QC members rate lack of financial resources as more important to QCs' failure than top management personnel. It appears that top

management, supporting staff, and QC members are making different types of defensive attributions concerning the QCs' failure.

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Table 1

Attributional Differences Among Top Management, Supporting Staff, and QC Members

Variable	Mean			F	p
	Management	Staff	QC Member		
1. Conflict between QC meeting and production schedules	4.58[a]	4.42[ac]	3.43[bc]	4.45	.014
2. Lack of support from QC leaders	3.00[ac]	2.11[ab]	3.17[c]	4.38	.015
3. Poor communication channels to top management	4.08[a]	5.25[bd]	5.29[cd]	3.38	.035
4. Lack of commitment from top management	3.79[ad]	5.17[bc]	4.58[cd]	3.44	.036
5. Lack of financial resources	4.45[a]	5.42[ac]	5.46[bc]	4.14	.019
6. We have been doing it this way for many years	4.83[a]	5.05[bd]	5.97[cd]	4.02	.021
7. Difficult quality problems	3.91[a]	3.94[bd]	5.02[cd]	6.27	.003

Note. Means not sharing a common superscript are different from each other (Tukey test, $p < .05$).